

Heritage Resources

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Affected Environment

Prior to 2002 and the initiation of specific cultural resources field studies and analyses for the Trout-West Project, numerous comprehensive efforts to identify and evaluate cultural sites were conducted within and in close proximity to the area potentially affected by proposed Trout-West treatments. This prior work includes fifty-one cultural resource surveys completed in the period 1974 to 2001; these previous investigations were done primarily to satisfy the requirements of Section 106 of the National Historic Preservation Act. The investigations were for timber sales, mineral explorations, prescribed burns, small tracts act actions, grazing allotment permit reissuance, special use permit issuances, power transmission lines, and other projects proposed by the Forest Service and private enterprise. A few of these prior investigations were done to further knowledge of known or suspected cultural properties; one was a road reconnaissance for the express purpose of identifying historic resources within the confines of the Forest, and another was the recording and evaluation of the Manitou Experimental Forest Headquarters.

Through these efforts, approximately 9,500 acres within the analysis area have been inventoried for cultural sites, or about 47 per cent of the total area proposed for treatment through implementation of the preferred action alternative. It should be noted that seventeen of the prior surveys were conducted before 1985, when field methods could be described as "reconnaissances" by one or two individuals. Standards for survey coverage was upgraded according to new Colorado State Preservation Office standards in that year, and since 1985 all field surveys employ systematic and thorough pedestrian inspection of most if not all of individual treatment units. The acres surveyed during these pre-1985 surveys are not included in the 9,500 acres total reported above. Through these prior investigations, 89 cultural properties were identified, recorded, and evaluated for the Trout-West analysis area. The records for these previously known properties were reviewed during the current analytical process in terms of site significance (meeting criteria for entry on the National Register of Historic Places) and for potential impacts based on proposed Trout-West treatments.

In 2001 the Forest Service initiated a cultural investigation of the Trout-West proposed treatment units (project area) with the express purpose of complying with the procedures outlined in Section 106 of the National Historic Preservation Act, as amended. Pursuant to this goal, a field survey sampling plan for each treatment unit was developed and submitted to the Colorado State Historic Preservation Officer (SHPO) for review and concurrence or comment. After SHPO approval, field studies were initiated in the fall of 2001 and completed in the fall of 2002.

The Trout-West field studies yielded twelve additional new cultural properties in the area of potential effects for Trout-West, including eight prehistoric sites and four historic sites. Also, four of the properties recorded during previous investigations, specifically those originally evaluated as needing more information before a determination regarding National Register of Historic Places entry, were reevaluated.

Adding the twelve newly discovered properties to the previous total of 89 results in a total of 101 known properties within the Trout-West area of potential effects. There are 76 historic properties and twenty-five prehistoric properties. "Historic" properties refers to sites with materials and items common to European immigrant cultures of the Western Frontier and the use of such properties usually dates after AD 1860 in the Pike National Forest. "Prehistoric" properties refers to sites with materials and items common to American Indian cultures of Colorado, and the use of these sites usually dates before AD 1860 and may be much earlier (even several thousand years ago). Of the total 101, thirteen are eligible or recommended eligible for listing on the National Register of Historic Places. Their eligible status is based on content in terms of documented archeological deposits and the potentially valuable information they contain, historic engineering attributes, and/or association with important historic events or persons. One of the National Register eligible properties has been listed on the Colorado State Register of Historic Places. Eighteen properties require additional study before a National Register determination can be made, and the remaining 70 cultural properties are not significant ("not eligible") in term of the Register.

Seventeen of the twenty-five recorded prehistoric properties (or "sites," the term generally used by archeologists) are characterized generally as surface areas of stone tools, stone tool manufacturing debris, and in some cases, fire-cracked rock. Concentrations of finished tools and manufacturing debris were noted at some of the sites; such concentrations may represent the remnants of temporary dwellings or outdoor activity areas. Total quantities of material items on the surfaces of these properties range from less than ten to approximately seventy-five. Prehistoric sites with these manifestations are usually interpreted as camps, or as resource collecting and processing areas. Thus, most of the known and recorded prehistoric properties recorded during previous investigations probably represent locations where small prehistoric social groups resided for a short period while harvesting local resources; or, some of the smaller sites may be areas where collected resources were processed or consumed. The prehistoric sites thought to be seasonal campsites have comparatively few total amounts of surface items. (No site reviewed for the Trout-West study had more than 75 total surface items. It is not uncommon in other parts of the Pike National Forest for sites to have 50 to 100 or even more than 100 surface items.) Four of the 25 known prehistoric properties are culturally peeled ponderosa trees; also, two of the surface sites had similarly peeled trees within the defined site areas. American Indian groups apparently harvested bark strips from these trees for use as a foodstuff and/or for ceremonial purposes. Similar trees in other locations within the Pike National Forest have been cored and the peeling scars dated. The date range for the scars falls within the decades of the early 19th century (AD 1820-1860). So, it appears the Trout-West peeled ponderosa trees were used by late period groups.

Two other two prehistoric properties not characterized as surface areas or peeled trees are rock shelters located in granitic outcrops adjacent to stream courses. These overhangs would be ideal campsites for mobile groups harvesting and consuming local resources during any season when the area was not rendered impassible by heavy snowfall. The depths of cultural deposits in each shelter is greater than one meter, suggesting a fairly lengthy total period of use (perhaps several thousand years). Because the total volume of deposit for each shelter is substantial, these two properties have the potential to contribute important data to our knowledge of prehistoric cultural in the eastern portion of montane Colorado.

The remaining two prehistoric sites yet to be described are characterized as “quarries.” That is, they are discrete areas where local bedrock outcrops provided raw materials suitable for the manufacture of flaked stone tools (the stone raw material must be suitable for creating sharp and durable edges or points). Quarry sites contain these outcrops plus evidence of prehistoric activity such as portable and usable fragments of the quarried raw material (“cores” or “blanks”) and waste material (“debitage”) remaining from on-site stone tool manufacture.

Based on the apparent shallow extent of the cultural deposits at the surficial prehistoric properties and the presence of the peeled ponderosa trees, it is thought that most of the sites reviewed for this study contain a substantial late period component (AD 1500-1870). However, several projectile points identified during the course of the field work date much earlier; a few, based on their morphology, may have been manufactured more than 2000 years ago. It could not be determined from the available information whether these are items salvaged from early archeological contexts and used by later groups, or whether they actually reflect early use of the Trout-West area. It may be that some of the sites contain a mixture of deposits and materials representing the late period and an earlier use.

None of the prehistoric properties are listed on the National Register of Historic Places, but one is eligible for listing based on official opinions by the Forest Service and the Colorado SHPO. Fifteen others (including the two rockshelters, three peeled trees, and one of the quarries) are potentially eligible based on their archeological content. These properties contain preserved archeological deposits that are storehouses of archeological and cultural information. The deposits are potential sources for addressing research problems in Colorado Mountain archeology, for example, calculating the time span of prehistoric occupation in the southern Rocky Mountains, or reconstructing the subsistence patterns and other lifeways of indigent social groups. Some of the sites may be important as traditional cultural areas to the modern descendants of the American Indians peoples who previously inhabited the eastern part of the Colorado mountains area. Specifically, some tribes have indicated in previous consultations that peeled or scarred trees that were used by historic Indian tribes and have survived to the present are important cultural resources; they are regarded as such by the Forest Service and are protected. Tribal governments and other officials of tribes with possible traditional ties to the area, or those tribes that have previously indicated interests were contacted regarding the Trout-West Project; none of the contacted authorities communicated any particular concerns or issues. The remaining nine known prehistoric properties are not eligible for listing on the National Register.

The 76 recorded historic sites reflect a variety of activities and uses of National Forest system lands. Common historic themes reflected in the content and context of Trout-West historic properties are mountain homesteading and ranching, logging, mining, public lands administration, and transportation. A few other recorded historic properties at Trout-West reflect the beginnings of the Colorado Mountains resort industry and public recreation, the Public Works Era of the 1930s, military history, and National Forest administration. The homestead or ranching related sites (27 total) include six ranching homesteads in the Manitou Park vicinity, one site that reflects early 20th century experiments with potato farming, the site of the local one-room schoolhouse, and sixteen dump sites containing household refuse.

The sites interpreted as homesteads date to the last decades of the 19th century before the private lands in Manitou Park were acquired by a local magnate and patron of Colorado College, Dr. William Bell. The potato farming and the dumps date to the 1930s-1950s time frame. Also reflecting the homestead/ranching theme are three properties without structures that were probably camps frequented by stock tenders; one of these sites contains the deteriorated remnants of a herder's wagon. The logging related sites include three sawmills and seven camps or cabins apparently used by harvesting crews or sawmill laborers. Also associated with the logging theme is the grade and deteriorated structures of the Manitou Park Logging Railroad that was used to haul timber cut in the Park to a sawmill at the south end of the park in the late 19th century. The saws at the mills featured steam power, which implies they were in operation in the late 19th or very early 20th century. Mining related sites (16 total) include several rather small mines, three prospecting areas, and several log cabins or tent camps thought to have been used by miners. None of the mining phenomena here measure up to those recorded in other parts of the Pike National Forest - apparently, the local ores were poor in terms of economic potential. This is a surprising result considering the southwest part of the Trout-West analysis area is adjacent to the Cripple Creek mining district. The mining related sites in the analysis area date from the last part of the 19th century up to World War II. Transportation related sites (three total) include the grade of the Midland Terminal Railroad, the site of the original highway bridge across Trout Creek (this is only the physical location of the former bridge; the bridge itself was replaced in 1999), and the Rampart Range Road which was constructed by Civilian Conservation Corps crews in the late 1930s. The transportation sites date from the 1880s to the 1930s.

Other recorded historic sites include several recreation-related developments or activity locations. These include the building foundations and refuse reflecting the location of Dr. Bell's resort hotels in Manitou Park and six hunters' camps. Public work improvements constructed during the Depression Era are represented by a series of historic erosion control structures on tributary drainages in Manitou Park (each well-preserved series was recorded as a cultural property). These were constructed by the California Conservation Corps (CCC) or Works Progress Administration (WPA) in the late 1930s.

Also linked both to public works agencies of the 1930s and Forest Service administration are several sites. These include the Headquarters of the Manitou Experimental Forest (constructed by public works crews in the 1930s and now listed on the Colorado State Register of Historic Places), the Manitou Park Dam, the Manitou Park Picnic Shelter, and the Rampart Range Road and associated structures (previously mentioned). These cultural properties may have significance through their association with the Era of Public Works and the crews that constructed them. Another Depression Era property is a liquor still location. This is probably a reflection of Prohibition when the thirsts of Front Range high rollers were quenched by illegal hooch made in hidden mountain distilleries. Miscellaneous historic properties include two military bivouac sites and the former location of a Pike National Forest ranger station (on Phantom Creek).

None of the historic sites are listed on the National Register of Historic Places; however, one, the Headquarters and Research Station for the Manitou Experimental Forest, is listed on the Colorado State Register of Historic Places. Three historic properties associated with the Depression Era of Public Works theme are eligible for listing; these include one series of check dams/erosion control structures in Manitou Park, the Manitou Park Dam, and the Manitou Picnic Shelter. One other eligible property is the grade of the Midland Terminal Railroad (the grade is regarded as significant in locations where its structural integrity remains intact).

Ten other known historic properties are potentially eligible for listing on the National Register based on the completion of more research or the rendering of an official opinion by the Colorado SHPO. These are mostly in the Manitou Park area and are associated with early homesteading or mining within the Park, or with Dr. Bell's resort hotel operation. The Prohibition illegal liquor still is in this category. The remaining 61 historic sites are not eligible for listing on the National Register.

Desired Future Condition

All recorded heritage sites are evaluated for significance according to the criteria for the National Register of Historic Places. Sites determined eligible are protected from adverse effects from all sources, including activities in other program areas. Mitigating the effects of projects on significant sites shall be considered on a case-by-case basis as warranted; and, mitigation plans will be implemented as needed. Decisions about significance and protection are determined by the heritage resource program manager, in consultation with the appropriate line officer, interested parties, and the Colorado SHPO. Significant sites are preserved for scientific investigation or interpretation, and traditional cultural sites or locations are preserved and not publicized. Other appropriate public uses are designed and implemented as practicable. Individual desired future conditions in terms of hazardous fuels reduction treatments, including prescribed fire, mechanical thinning, saw log yarding, construction of temporary roads, piling and burning, and non-classified road restoration are listed as follows:

- Damage to surface and subsurface deposits at significant archeological properties is negligible to non-existent. The boundaries of treatment units are modified as necessary to exclude significant archeological sites. Proposed routes for temporary haul roads and the locations of slash piles are planned so that they avoid significant archeological sites.
- Standing buildings and other cultural properties with structural components are protected from damage by the heavy equipment typically employed during hazardous fuels reduction treatments. If prescribed fire is a proposed treatment, then cultural properties containing standing structures are protected by blacklining and by active fire behavior monitoring during the burn.
- The locations of sensitive archeological resources are considered when designing the support facilities needed for the implementation of mechanical treatments or prescribed burning. Such support facilities include helicopter landing zones, heavy equipment staging areas, temporary administrative areas with tents or trailers, etc.
- The planning process for proposed hazardous fuels treatment projects includes provisions for identification and protection of significant heritage sites.
- Traditional cultural properties, including culturally peeled trees, and traditional areas are protected during the implementation of hazardous fuel treatments and these resources are considered during the planning process.
- In cases where the local scenery and setting are an integral contributor to the significance of a cultural property, design treatments so the setting and scenery are preserved.

Forest Plan Direction, Standards and Guidelines

- Protect, find an adaptive use for, or interpret all cultural resources on National Forest System (NFS) lands which are listed on the National Register of Historic Places, the National Register of Historic Landmarks, or that have been determined to be eligible for the National Registers.
- Nominate or recommend cultural resource sites to the National Register of Historic Places by 1990 in the following priority:
 - o Sites representing multiple themes;
 - o Sites representing themes which are not currently on the National Register within the State; or,
 - o Sites representing themes which are currently represented by single sites.
- Protect and foster public use and enjoyment of cultural resources:

- Complete cultural resources surveys prior to any ground-disturbing project;
- Avoid disturbance of known cultural resources until evaluated and determined not significant;
- Collect and record information from sites where there is no other way to protect the properties;
- Issue antiquities permits to qualifying academic institutions or other organizations for the study and research of sites.

Significant Cultural Properties and Their Relationship to Proposed Treatments

The identification process for cultural properties potentially affected by the Trout-West Project included first a literature and files search to locate known properties and secondly a field study. The literature search was conducted in a block fashion to include all sections within the proposed treatment units and a one-mile radius; the field investigation was specifically designed to include only those lands within proposed treatment units according to maps proposed by the project planners. Thus, the literature and files search yielded cultural properties in the near vicinity of proposed treatment units but not within the actual boundaries of such units. Given the nature of the proposed Trout-West treatments (mechanical thinning, prescribed fire, construction of temporary haul roads, piling and burning of slash, and restoration of non-system roads), the cultural properties in the near vicinity of treatment units would not be directly affected by implementation of the Proposed Action or any of the alternatives. The cultural properties in this category include the one property listed on the Colorado State Register of Historic Places (the Manitou Experimental Forest Headquarters) and several of the National Register eligible properties including the Manitou Lake Dam, the Manitou Park Picnic Shelter, and the grade of the Midland Terminal Railroad. Other National Register eligible or potentially eligible cultural properties identified during the files search or the field surveys are within the boundaries of treatment units and potential direct or indirect impacts are considered in the discussion of each alternative.

Proposed Action

Direct Effects

Implementation of the mechanical and prescribed fire treatments as contained in the Proposed Action has the potential to directly affect cultural properties. Mechanical treatment can damage or destroy the cultural deposits integral to the significance of prehistoric or historic archeological sites. The deployment and use of heavy equipment and vehicles in the activities common to mechanical treatment can displace and mix archeological soils and also damage or destroy the artifacts and other cultural materials common in such deposits. Historic cultural properties that contain standing or collapsed structural features can also be damaged by the implementation of mechanical treatments and the use of vehicles and heavy equipment.

Culturally peeled trees and other cultural properties with traditional significance to Indian tribes can be damaged or destroyed as well. The effects of fire on cultural properties has been well documented (e.g., Lentz et al. 1996). Fire can damage archeological deposits and the artifacts contained therein; burning and damage can extend to subsurface deposits and their contents (Lentz et al. 1996, page 42). Fire can destroy wooden structures and can warp or melt structures with metal components. Stone and masonry structures also are vulnerable; stone and masonry elements become more friable and can exfoliate after exposure to fire. Also, discoloration is a common result. Culturally peeled trees can burn, or the trees can die and ultimately disintegrate. The historic forest setting of significant cultural sites can be marred or severely altered by fire or mechanical treatment. Therefore, the potential direct impacts from projects including mechanical and prescribed fire treatment are significant and measurable.

However, these impacts are only theoretical in their nature. Adopting a policy of avoidance and related measures is a very effective means of coping with potential direct affects of the Trout-West Project and similar proposals. The files search and later field investigations for Trout-West has yielded the identification and location of significant cultural properties potentially directly affected by the proposed mechanical and fire treatments integral to implementation of the Proposed Action. The locations of significant cultural properties are data available to the resource managers designing treatment units, and by specifying no treatment in these locations and their immediate vicinity, there will be no direct impacts resulting from the implementation of this alternative. The avoidance methods can be extended to protect site settings as well as the physical remains common to cultural sites. Also, the perimeters of cultural sites can be flagged or barriers provided, and if the property is vulnerable to fire, a protective margin around the property can be blacklined. Fire crews on station to control the prescribed burning can be stationed in close proximity to cultural properties containing vulnerable structures in the event the structures are threatened. Implementation of these measures will be effective in avoiding all direct impacts resulting from the Proposed Action.

Indirect Effects

In general, indirect effects associated with the implementation of the Proposed Action include increased soil exposure and subsequent wind and water erosion resulting from thinning of vegetation. This erosion, if unchecked, might eventually expand to archeological sites and their vicinity. Also, prescribed fire treatment will result in the loss of duff and ground cover; this may result in the exposure of previously unknown and unrecorded archeological deposits and materials. Freshly uncovered materials would be vulnerable to loss through oxidation and weathering and by collectors. Losses resulting from the implementation of the Proposed Action and these indirect effects are seen as slight in the context of the complete set of known and recorded cultural properties.

Cumulative Effects

The implementation of the Proposed Action should result in only negligible loss of archeological soils and the artifacts contained therein. Therefore, any related or future resources management projects in the same area will not add substantially to this slight loss.

Alternative A

Direct Effects

Alternative A includes only mechanical treatment of hazardous fuels and eliminates prescribed fire treatments. Identifying and avoiding all significant cultural properties during the development of specific treatment plans will result in no direct affects to cultural sites during the implementation of this alternative. There is no difference in direct effects to cultural sites when comparing the Proposed Action to Alternative A.

Indirect Effects

Implementation of Alternative A will have fewer indirect effects in comparison with the Proposed Action because prescribed fire and its associated destruction of ground cover has been eliminated from this alternative. Less loss of vegetation cover will result in less soil erosion and decrease the sizes of vulnerable bare areas. There will be less exposure of unrecorded archeological deposits and materials, less weathering, and less vulnerability to collecting. However, the comparative benefit is only slight when compared to the Proposed Action.

Cumulative Effects

Cumulative effects resulting from the implementation of Alternative A would be similar to those described for the Proposed Action.

Alternative B

Direct Effects

Alternative B includes the employment of prescribed fire as a treatment on that portion of the project area within one mile of private property that contains at least one home per 40 acres. Incorporating avoidance of the locations of significant cultural sites and their near vicinity during planning and during the implementation of treatments will result in no direct impacts. Thus, the direct effects of implementing Alternative B will be similar to the Proposed Action and Alternative A. The differences between this alternative and the others is negligible in respect to cultural sites and direct effects.

Indirect Effects

Indirect effects of implementing Alternative B will be greater than those described for Alternative A but less than the Proposed Action. That is, there should be more potential for water and wind erosion and greater exposure of artifacts and materials than that forecast for Alternative A, but less potential for such effects than forecast for the Proposed Action. However, because such effects should be slight for both the Proposed Action and Alternative A, the differences among the alternatives when considering indirect effects on significant cultural sites is negligible.

Cumulative Effects

Cumulative effects of implementing Alternative B will be similar to those described for the Proposed Action and Alternative A.

Alternative C

Direct Effects

Alternative C is similar to the Proposed Action without building any temporary roads. The direct effects of implementing Alternative C are negligible for significant cultural properties and therefore are similar to those described for the Proposed Action and Alternatives A and B.

Indirect Effects

The indirect effects of implementing Alternative C should be similar to those described for the Proposed Action.

Cumulative Effects

The cumulative effects of implementing Alternative C should be similar to those described for the Proposed Action and Alternatives A and B.

Alternative D

Direct Effects

Alternative D would treat vegetation within $\frac{1}{4}$ mile of private property with at least one home per 40 acres. The direct effects of implementing Alternative D are negligible when specifically considering cultural properties. In comparison, the effects would be the same as those forecast for the implementation of the Proposed Action and Alternatives A, B, and C.

Indirect Effects

Indirect effects resulting from the implementation of Alternative D are seen as similar in nature to those described for the Proposed Action and Alternatives A, B, and C. There may be some slight loss of archeological soils and materials. Loss of vegetation ground cover could result in the exposure and weathering of artifacts and materials that are presently unknown, which would increase their vulnerability to collectors. However, because the indirect effects are estimated as slight or negligible, there is no difference in comparison with the Proposed Action and Alternatives A, B, and C.

Cumulative Effects

Cumulative effects should be negligible and similar to those forecast for implementation of the Proposed Action and Alternatives A, B, and C.

Alternative E

Direct Effects

Implementation of Alternative E would result in the most aggressive treatment scheme. It would include harvest openings on 30% of the project area to mimic historic conditions. However, implementation of avoidance for significant cultural property locations and their near vicinities would result in no or negligible impacts on cultural resources. Hence, in terms of direct impacts, the effects of Alternative E would be similar to the Proposed Actions and Alternatives A, B, C, and D.

Indirect Effects

The more aggressive treatments contained in Alternative E would result in greater indirect effects of the same nature as described for the Proposed Action and Alternatives A, B, C, and D. That is, there would be greater wind and water caused soil erosion resulting from loss of holding vegetation, and there would be greater exposure of currently unrecorded and hidden archeological materials and deposits. The exposed archeological materials would be subject to loss through disintegration and pilferage by collectors. However, these potential losses would be slight given the total amount of archeological soils and materials in the treatment units. In comparison with the Proposed Action and Alternatives A, B, C, and D, the indirect effects of implementing Alternative E would be only slightly greater.

Cumulative Effects.

The cumulative effects of Alternative E are seen as similar to those of the Proposed Action and Alternatives A, B, C, and D. There should be little quantitative differences among the alternatives.

